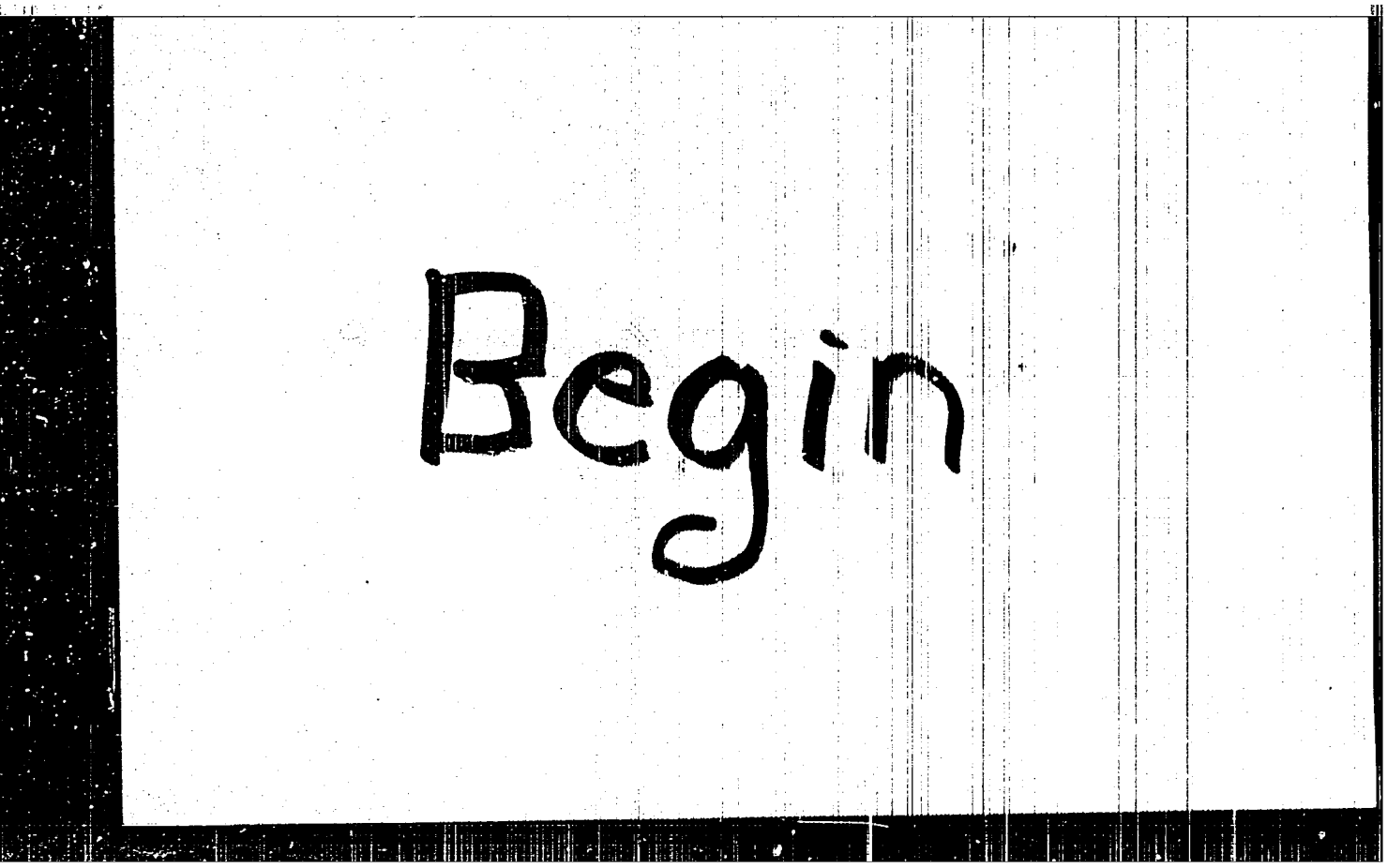
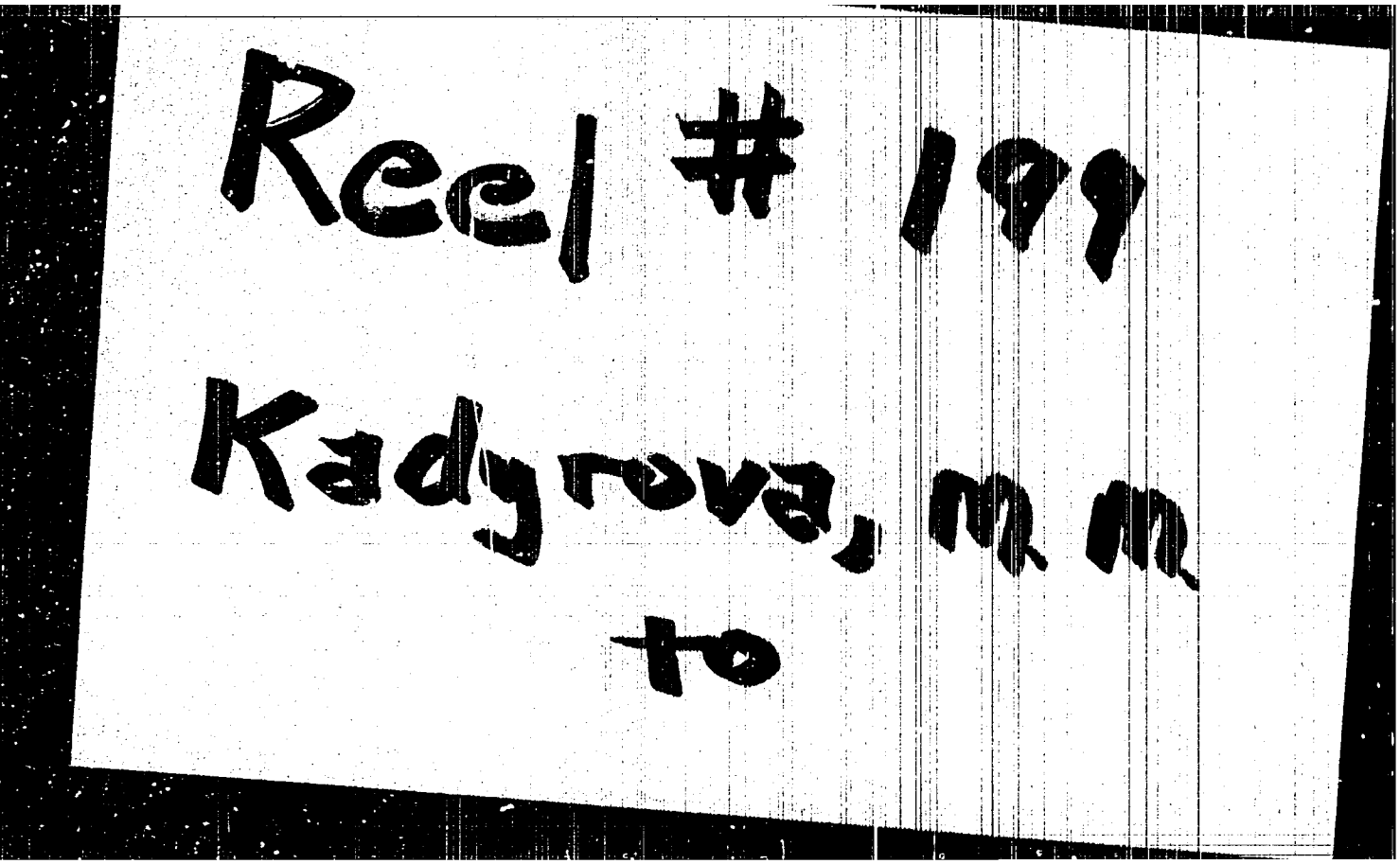




KADYROVA, M.M.

Chronic lupus erythematosus; data from the skin & venereal disease clinic of the First Leningrad Medical Institute. Vest.derm. i ven. 32 no.2:80-82 Mr-Ap '58. (MIRA 11:4)

1. Iz kliniki kozhnykh i venericheskikh bolezney I Leningradskogo meditsinskogo instituta (zav. klinikoy - deystvitel'nyy chlen AMN SSSR prof. O.N.Podvysotskaya)
(LUPUS ERYTHEMATOSUS, DISSEMINATED, statist.
clin.statist. (Rus))
(LUPUS ERYTHEMATOSUS, DISCOID, statist.
same)

The efficacies of different therapeutic methods used in 114 cases of lupus erythematosus treated in the years 1947-1954 were compared. The best method is apparently intradermal application of acrichin with novocain, especially in the chronic discoid form of the disease. Kraus - Hradek Králové

KADYROVA, N.K.

Effect of a dried fruit decoction on the secretion and evacuatory function of the stomach at high temperatures. Dokl. AN Uz. SSR no.1:67-70 '57. (MIRA 11:5)

1.Institut zoologii i parazitologii AN UzSSR. Predstavleno akad. AN UzSSR A.Yu. Yunosovym.
(Stomach) (Fruit)

Kadyrova, M.K., Cand Bio Sci--(diss) "Effect of dry fruit decoctions upon the functions of the stomach and diuresis." Tashkent, 1958. 18 pp (Tashkent State Pedag Inst im Nizami and the Laboratory of Physiology of the Inst of Regional Medicine of the Acad Sci Uzbek SSR), 150 copies (KL,25-58, 110)

KADYROVA, N.K.

Effect of blood loss on the content of mineral salts and water in the skin. Dokl. AN Uz.SSR. 21 no.3:56-58 '64.
(MIRA 19:1)

1. Tashkentskiy gosudarstvennyy pedagogicheskiy institut imeni Nizami. Submitted May 7, 1963.

KADYROVA, T.K., kandidat meditsinskikh nauk (Leningrad); FREYDZON, V.A. (Leningrad)

A case of Marchiafava disease with extrapyramidal hyperkinesia. Klin. med. 35 no.2:143-146 F '57 (MLRA 10:4)

1. Iz gematologicheskoy kliniki (zav.-prof. S.I. Sherman) Leningradskogo instituta perelivaniye krovi i kafedry nervnykh bolezney (zav.-deystvitel'nyy chlen AMN SSSR prof. S.N. Davidenkov) Leningradskogo Gosudarstvennogo instituta dlya usovershenstvovaniya vrachey.

(HEMOGLOBINURIA, PAROXYSMAL, compl.
extrapyramidal hyperkinesia)
(MOVEMENT DISORDERS, case reports
extrapyramidal hyperkinesia in paroxysmal hemoglobinuria)

KADYROVA, T. K. Doc Med Sci -- (diss) "Variations of the nervous system during leukosis." Len, 1958. 28 pp (Len State Order of Lenin Inst for the Advanced Training of Physicians im S. M. Kirov. Inst of Experimental Medicine. Len Order of Labor Red Banner Inst of Blood Transfusion), 200 copies (KL, 52-58, 106)

KADYROVA, T.K.

Combination of tubercular meningitis and chronic myelosis. Vrach. delo no.6:629 Je '58 (MIRA 11:7)

1. Kafedra nervnykh bolezney (zav. - prof. S.P. Davidenkov) Leningradskogo instituta usovershenstvovaniya vrachey i terapevticheskaya klinika (zav. - prof. S.I. Sherman) Leningradskogo instituta perelivaniya krovi.
(MENINGITIS--TUBERCULOSIS)
(MARROW--DISEASES)

KADYROVA, T.K. (Leningrad).

Vascular disorders of the brain in leukoses. Klin.med. 36 no.7: 141-145 Jl '58 (MIRA 11:11)

1. Iz kafedry nervnykh bolezney (zav. - prof. S.N. Davidenkov) Leningradskogo instituta usovershenstvovaniya vrachey i terapevticheskoy kliniki (zav. - prof. S.I. Sherman) Leningradskogo instituta perelivaniya krovi.

(LEUGEMIA, compl.
multiple small brain hemorrh. (Rus))
(CEREBRAL HEMORRHAGE, etiol & pathogen.
leukemia causing multiple small hemorrh. (Rus))

KADYROVA, T.K.

Disease of the vegetative nervous system in leucoses. Azerb.med. zhur. no.12:10-14 D '59. (MIRA 13:4)

1. Iz kafedry nervnykh bolezney (zaveduyushchiy - deystvitel'nyy chlen AMN SSSR, zasluzhennyy deyatel' nauki prof. S.N. Davidenkov) Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey im. S.M. Kirova.
(NERVOUS SYSTEM, AUTONOMIC--DISEASES) (LEUKEMIA)

KADYROVA, T.K., kand.med.nauk (Leningrad)

On disorders of the nervous system in polycythemia, Biermer's anemia and leukoses. Klin.med. 37 no.9:132-137 S '59. (MIRA 12:12)

1. Iz kafedry nervnykh bolezney (zav. - deystvitel'nyy chlen AMN SSSR zasluzhennyy deyatel' nauki prof. S.N. Davidenkov) Leningradskogo instituta usovershenstvovaniya vrachey i gematologicheskoy kliniki (zav. - prof. S.I. Sherman) Leningradskogo instituta perelivaniya krovi.

(POLYCYTHEMIA, pathology)
(ANEMIA, PERNICIOUS, pathology)
(LEUKEMIA, pathology)
(NERVOUS SYSTEM, pathology)

DAVIDENKOVA, Ye.F.; SAVEL'YEVA-VASIL'YEVA, Ye.A.; KADYROVA, T.K.

Neurological characteristics of viral influenza A-57 (Asian).
Zhur.nevr. i psikh. 59 no.4:471-480 '59. (MIRA 12:6)

1. Kafedra nervnykh bolezney (zav. - prof. Ye.F.Davidenkova) Leningradskogo pediatricheskogo instituta.
(INFLUENZA, pathol.
Asian, brain (Rus))
(BRAIN, pathol.
in influenza, Asian (Rus))

KADYROVA, T.K., aspirant

Use of antitoxic liquid in the treatment of pneumonia in children.
Med. zhur. Uzb. no.2:31-34 F '60; (MIRA 15:2)

1. Iz kafedry detskikh bolezney lechebnogo fakul'teta (zav. - prof. K.G.Titov) Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(PNEUMONIA) (TOXINS AND ANTITOXINS)

KADYROVA, T.K.

Change in the eyes and the picture of the fundus oculi in leukemias. Vrach.delo no.6:545-546 Je '60. (MIRA 13:7)

1. Kafedra nervnykh bolezney (zav. - deystvitel'nyy chlen AMN SSSR, prof. S.N. Davidenkov) Leningradskogo instituta usovershenstvovaniya vrachey i gematologicheskaya klinika (zav. - prof. S.I. Sherman) Leningradskogo instituta perelivaniya krovi.
(EYE--DISEASES AND DEFECTS) (LEUKEMIA)

KADYROVA, T.K., aspirant

Hematological changes in pneumonia following application of antitoxic liquid in children. Med. zhur. Uzb. no.9:39-41 S '61. (MIRA 15:2)

1. Iz kafedry detskikh bolezney (zav. - prof. K.G.Titov) lechebnogo fakul'teta Tashkentskogo gosudarstvennogo meditsinskogo instituta.

(BLOOD--ANALYSIS AND CHEMISTRY)
(PNEUMONIA) (TOXINS AND ANTITOXINS)

KADYROVA, T. K., dok. med. nauk (Baku)

Disorders of the peripheral portion of the nervous system in leukoses. Klin. med. no.6:74-77 '61. (MIRA 14:12)

1. Iz gematologicheskoy kliniki (zav. - prof. S. I. Sharman) Leningradskogo instituta perelivaniya krovi i kafedry nervnykh bolezney (zav. - deystvitel'nyy chlen AMN SSSR prof. S. N. Davidenkov) Gosudarstvennogo instituta dlya usovershenstvovaniya vrachey im. S. M. Kirova.

(LEUKEMIA) (NERVES, PERIPHERAL—DISEASES)

KADYROVA, T.K.; EFENDIYEV, M., red.; MUSTAFAYEVA, S., red.; BAGIROVA, S., tekhn. red.

[Leucosis and the nervous system; clinical and morphological studies]Leikozy i nervnaia sistema; kliniko-morfologicheskie issledovaniia. Baku, Azerbaidzhanskoe gos.izd-vo, 1961. 229 p. (MIRA 16:2)

(NERVOUS SYSTEM—DISEASES) (LEUKEMIA)

KADYROVA, T.K., prof.; KULIYEVA, F.Ya.

Clinical aspects and treatment of postinfluenza arachnoiditis. Sbor. trud. Azerb. nauch.-issl. inst. kur. i fiz. metod. lech. no.9:12-16 '63. (MIRA 18:8)

KADYROVA, T.K.; KULIYEVA, F.Ya.

Effectiveness of compound treatment of chronic lesions of the suprathoracic truncus sympathicus. Sbor. trud. Azerb. nauch.-issl. inst. kur. i fiz. metod. lech. no.9:186-187 '63.
(MIRA 18:8)

KADYROVA, V.Kh.; KIRPICHNIKOV, P.A.; TOKAREVA, L.G.

Synthesis of organophosphorus stabilizers of polymers. Trudy KKHTI no.30:58-62 '62. (MIRA 16:10)

L 42171-66 EWP(j)/EWT(m) RM

ACC NR: AR6014534 (A) SOURCE CODE: UR/0081/65/000/019/S037/S037

AUTHORS: Kirpichnikov, P. A.; Kadyrova, V. Kh.

26

B

TITLE: Sulfur-containing polyphosphites and some of their properties

SOURCE: Ref. zh. Khimiya, Abs. 19S222

REF SOURCE: Tr. Kazansk. khim.-tekhnol. in-ta, vyp. 33, 1964, 193-197

TOPIC TAGS: aromatic phosphorus compound, organic synthetic process, organic sulfur compound

ABSTRACT: Sulfur-containing polyphosphites (SP) are obtained in 90--96% yield by polytransesterification of diphenylphosphite esters $(C_6H_5O)_2POR$ (R--CH_3, C_2H_5, iso-C_3H_7, iso-C_4H_9, iso-C_5H_{11}, C_6H_5, $C_{10}H_7$) with bis-(4-oxyphenyl)-sulfide. The process is accomplished in two steps: first, by heating equimolar amounts of reactants in N_2 atmosphere for 1--1.5 hours at 260--278C, then for 2--2.5 hours at 120-180C/9--12 mm and for 2--3 hours at 170--210C/1 mm. SP are glassy materials, soluble in dioxane, chloroform, and benzene; they are slowly hydrolysed by water, contain 7--10% of P, and their molecular weight is from 820 to 2200. By heating with S for 10 hours at 160--170C, SP may be converted to corresponding thiopolyphosphates. V. Kireyev [Translation of abstract]

SUB CODE: 07

Card 1/1

ALEKSEYEVSKOV, L.A.; [illegible]

Production of phthalic anhydride. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh.inform. 12 no.4:7-[illegible] '56.

(MLRA 12:6)

ARISTOV, Ye.M.; Prinimali uchastiye: SHESTAKOVA, A.A.; KIRILLOVA, G.N.; KADYROVA, Ya.M.

Automatic device for opening press molds after the vulcanization of tire casings. Kauch.i rez. 20 no.7:50-51 Jl '61. (MIRA 14:6)

1. Voronezhskiy shinnyy zavod.
(Tires, Rubber)

ZHMYKHOVA, Anna; BORODIN, Ye., red.; GERSHANOV, Ye., red.; GUR'YANOV, S., red.; KARZANOV, V., red.; IVANOV, Ye., red.; MAMSUROVA, L., red.; MEDVEDEV, A., red.; KADYROVA, Z., red.

[International Confederation of Free Trade Unions; academic lectrues on the "International labor and trade-union movement"] Mezhdunarodnaia konfederatsiia svobodnykh profsoiuzov; uchebnye lektsii po distsipline "Mezhdunarodnoe rabochee i profsoiuznoe dvizhenie. Moskva, Kursy profdvizheniia dlia profaktivistov iz stran Azii, Afriki i Latinskoi Ameriki, 1963. 51 p. (MIRA 17:9)

AGALAROVA, D.A.; KADYROVA, Z.K.; KULIYEVA, S.A.; ALIZADE, A.A., red.; SHTEYNGEL', A.S., red. izd-va; BAGIROVA, S., tekhn. red.

[Ostracods in Pliocene and Post-Pliocene sediments of Azerbaijan]Ostrakody pliotsenovykh i postpliotsenovykh otlozhenii Azerbaidzhana. Baku, Azerbaidzhanskoe gos. izd-vo, 1961. 419 p. (MIRA 15:10)
(Azerbaijan—Ostracoda, Fossil)

Kadyrvayev, R. A.

STESHENKO,A.I.; ZHURAVLEV,S.P.; TARAN,P.N.; KUDRYASHOV,K.V.; ZHUKOV,M.N.; BELYY,P.L.; KADYRVAYEV,R.A.; PASTUSHKIN,P.M.; SHOSTAK,A.G.; OSTROUKHOV,A.I.; POLONSKIY,M.I.; OSTROUKHOV,I.I.; LUGOVSKIY,S.I.; SEMENKO,P.I.; KHOROSHEV,O.V.; IBRAYEV,Sh.I.; NEYKOV,O.D.

"Dust control in the mines of Krivoy Rog Basin." V.V.Nedin. Reviewed by A.I.Steshenko and others. Gor.zhur. no.9:61-62 S '55. (MIRA 8:8)

(Krivoy Rog--Mine dusts) (Nedin,V.V.)

KADYRVAYEV, R.A.

Prospects for developing iron ore mining in the Kustanay Economic Region. Gor. zhur. no.7:36-46 Jl '58. (MIRA 11:9)

1. Predsedatel' Kustanayskogo sovnarkhoza.
(Kustanay Province--Iron mines and mining)

KADYR-ZADE, N.D., aspirant

Effect of beta-radiation on experimental corneal ulcer. Oft. zhur. 14 no.4:209-215 '59. (MIRA 12:10)

1. Iz kafedry rentgenologii i radiologii (zav. - prof.Ye.D. Dubovyy) i kafedry glaznykh bolezney (zav. - prof.S.F.Kal'fa) Odesskogo meditsinskogo instituta im. N.I.Pirogova.
(CORNEA--DISEASES) (PHOSPHORUS--THERAPEUTIC USE)

KADYR-ZADE, N.D.

Therapeutic use of radioactive phosphorus (P^{32}) in corneal ulcers. Oft.zhur. 14 no.7:424-429 '59. (MIRA 13:4)

1. Iz kafedry rentgenologii i radiologii (zaveduyushchiy - prof. Ye.D. Dubovyy) i kafedry glaznykh bolezney (zaveduyushchiy - prof. S.F. Kal'fa) Odesskogo meditsinskogo instituta im. N.I. Pirogova.
(CORNEA--ULCERS) (PHOSPHORUS--THERAPEUTIC USE)

KADYR-ZADE, N. D., Cand Med Sci -- (diss) "Treatment application of radioactive phosphorus (P^{32}) in corneal ulcers. (Clinicoexperimental research)." Odessa, 1960. 17 pp; (Odessa State Medical Inst im N. I. Pirogov); 300 copies; price not given; (KL, 28-60, 165)

KADYZHANOV, K.K.

Conference on preventing silicosis in enterprises of the Karaganda Economic Council. Bezop.truda v prom. 5 no.1:35-36 Ja '61. (MIRA 14:2)

(KARAGANDA BASIN—LUNGS—DUST DISEASES)

KADYRZHANOV, F.A.

Experience in recognizing a spontaneous fire in its early stage. Nauch. trudy KNIUI no.16:28-32 '64.

Studying the temperature conditions of a worked-out area during the mining of a seam subject to spontaneous combustion. Ibid.:33-38 (MIRA 18:7)

BOGACHEV, V.P.; KADYRZHANOV, K.K.

First experience in putting out fires in waste rock piles in the Karaganda Basin. Nauch. trudy KNIUI no.16:38-42 '64. (MIRA 18:7)

KRYSENKO, N.S.; POZNYAKOV, V.Ya.; GAZARYAN, L.M.; ZADOV, Ya.B.; KADYRZHANOV, K.K.; KUZ'MIN, A.V.; TROITSKIY, A.V.; LEVGINTSEV, G.M.; MITROFANOV, S.I.; SOLOV'YEV, V.Ya.; SOBOL', S.I.; MYAGKOVA, T.M.; GAYLIT, A.A.; GENIN, N.N.; GRATSERSHTEYN, I.M.; SKORNYAKOV, Yu.T., referent

Fourth plenum of the central administration of the Scientific Technological Society for Nonferrous Metallurgy. TSvet. met. 38 no.5:90 My '65. (MIRA 18:6)

1. Chlen TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva tsvetnoy metallurgii i zavod "Ukrtsink" (for Krysenko). 2. Chlen TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva tsvetnoy metallurgii i "Severonikel'" (for Poznyakov). 3. Institut metallurgii im. Baykova (for Gazaryan). 4. Predsedatel' soveta Nauchno-tekhnicheskogo obshchestva Kol'chuginskogo zavoda OTsM (for Zadov). 5. Chlen TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva tsvetnoy metallurgii, Sovet narodnogo khozyaystva Kazakhskoy SSR (for Kadyrzhanov). 6. Predsedatel' gorno-geologicheskoy sektsii TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva tsvetnoy metallurgii; Gosudarstvennyy komitet Soveta Ministrov RSFSR po koordinatsii nauchno-issledovatel'skikh rabot (for Kuz'min). 7. Chlen TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva

(Continued on next card)

KRYSENKO, N.S.--- (continued) Card 2.

tsvetnoy metallurgii, Sovet narodnogo khozyaystva SSSR (for Troitskiy). 8. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy tsvetnoy metallurgii (for Lezgintsev). 9. Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh metallov (for Mitrofanov, Sobol', Genin). 10. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut splavov i obrabotki tsvetnykh metallov (for Solov'yev). 11. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh (for Myagkova). 12. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy tsvetnoy metallurgii (for Gaylit).

L 57742-65 EWT(d)/EWG(r)/EWT(l)/FS(v)-3/EWG(v)/EWG(m)-2/EWG(c) DD

AP5028161/0010/010 0118/0118

629.13.037.36

[illegible], D. Andriyashenko, [illegible]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, No. [illegible], 1959, 118

TOPIC TAGS: parachute, drogue parachute

ABSTRACT: An Author Certificate has been issued for a drogue parachute (see Fig. 1 of the Enclosure). This parachute will feature increased reliability and provide greater safety [illegible] the form of a spherical [illegible] the periphery, the [illegible] and provided with an external [illegible]

ASSOCIATION: none

SUBMITTED: 16Apr59 ENCL: 01 SUB CODE: AC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4040

Card 1/2

L 57743-65

ACCESSION NR: AP5016785

ENCLOSURE: 01

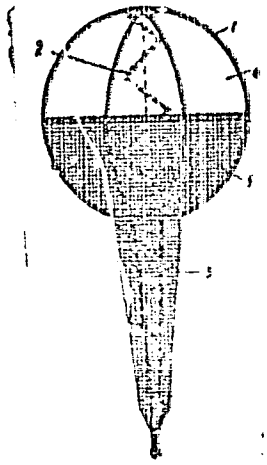


Fig. 1. Drogue parachute

1 - Spherical spring; 2 - inner spring; 3 - external spring; 4 - upper part (fabric); 5 - lower part (net).

Card 2/2

KADYSEV, YE. M.

USSR.

Mineralogy of the salt marsh Shor-Kan [Central Asia, U.S.S.R.]. A. I. Kuptsov and E. M. Kadysev. *Zapiski Uzbekistan. Otdel. Vsesoyuz. Mineralog. Obshch.* 4, 78–80 (1951).—The expedition of 1940 found that the salt marsh Shor-Kan is rich in mirabilite, glauberite, thenardite, and gypsum. A. F. Kapustinskii

KADYSEVA, N.M.

Use of royal jelly preparation in several clinical forms of arteriosclerosis. Inform.biul. o mat.moloch. no.3:90-94 '62. (MIRA 16:2)

1. Kafedra propedevtiki vnutrennikh bolezney (zav. dotsent N.M. Kadyseva) Yaroslavskogo meditsinskogo instituta (dir. prof. N.Ye. Yarygin).
(ROYAL JELLY—THERAPEUTIC USE) (ARTERIOSCLEROSIS)

654. REPHOPLASTY OF GLANDS OF INTERNAL SECRETION (Russian text) - Kadyseva N.M. Med. Inst., Yaroslavl - PROBL. ENDOKR. 1956, 2/6 (90-98)

The treatment of 4 patients with pituitary dwarfism by means of transplantation of the pituitary from human foetuses at the 5th-6th month of pregnancy is described. The pituitary transplantation was performed on the day the foetus was delivered and was performed in the thickness of the abdominal rectus muscle. A detailed account is given of one case of pituitary dwarfism under observation over a period of 20 yr. In the course of this period 3 pituitary transplants were performed (in 1936, 1950 and 1952). The patient increased in height from 114 cm. to 151 cm. and showed normal sexual development. Blood transfusion, particularly of the blood of pregnant women promoted more vigorous growth. Dilman - Leningrad (S)

KADYSHVA, Ye. A.: "The use of vitamin A to treat patients with certain dermatoses." Bashkir State Medical Inst imeni XVth Anniversary VLKSM. Ufa, 1955.
(Dissertation for the Degree of Candidate in Medical Sciences).

SO: Knizhnaya letopis', No 23, 1956

KADYSEVA, Ye.A.

Using vitamin A in eczema. Vest.ven. i derm. 30 no.4:54-56 Jl-Ag '56.
(MLRA 9:10)

1. Iz kafedry kozhnykh i venericheskikh bolezney Bashkirskogo meditsinskogo instituta.

(VITAMINS--A) (ECZEMA)

KADYSHEVA, Ye.A. (Ufa)

Effect of vitamin A on gastric secretion in some forms of dermatosis.
Vrach. delo no.1:91 Ja '57 (MLRA 10:4)

1. Kafedra koshnykh i venericheskikh boleznay Bashkirskogo meditsinskogo instituta.
(SKIN--DISEASES) (VITAMINS--A) (STOMACH--SECRETIONS)

99 patients with various dermatoses (psoriasis, eczema, etc.) were treated with vitamin A (course dose was 1-39 million units). After treatment, normal acidity of the gastric contents was restored in 67% of the patients. Long-term results, checked in 61 patients (a (after 3-24 months), showed that the acidity remains the same as upon conclusion of the course of treatment. -- V.P.Koneva.

SHISHKIN, P.N., starshiy nauchnyy sotrudnik; KADYSEVA, Ye.A., kand.med.nauk; FEDOROVA, G.B., vrach

Treatment of seborrhea of the scalp with sulsen. Vest.derm.i ven. no.7:49-50 '61. (MIRA 15:5)

1. Iz Ufimskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. - starshiy nauchnyy sotrudnik P.N. Shishkin), kafedry kozhnykh bolezney (zav. - prof. G.S. Maskimov) Bashkirskogo meditsinskogo instituta i mikologicheskoy detskoy bol'nitsy (glavnyy vrach M.Kh. Malyshev).
(SELENIUM SULFIDE--THERAPEUTIC USE) (SCALP--DISEASES)

KADYSH, F. [Kadiss, F.]

Results obtaines in experimental determination of mechanical parameters of filled earth foundations. Vestis Latv ak no.12: 41-46 '61.

ACCESSION NR: AP4031133 S/0056/64/046/004/1169/1177

AUTHORS: Demirkhanov, R. A.; Kady*sh, I. Ya.; Khody*rev, Yu. S.

TITLE: Skin effect in a high frequency annular discharge

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1169-1177

TOPIC TAGS: skin effect, plasma, discharge plasma, gas discharge, toroidal discharge, electron collision

ABSTRACT: The penetration of a longitudinal high-frequency magnetic field into a plasma was investigated at frequencies 0.9, 4.6, and 5.6 Mc, with particular attention to the study of the dependence of the thickness of the skin layer on the plasma density, which was varied continuously over a wide range. To eliminate edge effects in the plasma and in the magnetic field, a toroidal discharge in a quartz glass was used (diameter 18 cm, 2 diameter 5 cm). The tests were made for different limiting ratios of the field and electron-

Card 1/3

ACCESSION NR: AP4031133

collision frequencies, and of the ratios of the skin layer to the mean free path of the electron ($\omega/\nu_{eff} \ll 1$, $\omega/\nu_{eff} \gg 1$, and $\delta/\ell \gg \gg 1$, $\delta/\ell \ll 1$). It is shown that the character of penetration of the field in the plasma changes on going from one case to another. A penetration anomaly, manifest in an increase in the field amplitude as it propagates inside the plasma, is observed in the region near the discharge axis, and the conditions under which such an anomaly exists are determined. This anomaly cannot be explained by elementary theory and it is most likely the manifestation of the spatial-dispersion properties of the plasma. It is shown that such an anomaly can exist also if the plasma susceptance is assumed to be capacitive near the axis. "In conclusion the authors are grateful to Yu. G. Bobrov and V. P. Volkov for help with the experiment." Orig. art. has: 9 figures and 7 formulas.

ASSOCIATION: None

Card 2/3

L 27850-65 EWT(1)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EWA(m)-2 IJP(c) AT

ACCESSION NR: AP5005220 S/0057/65/035/002/0212/0222

AUTHOR: Demirkhanov, R.A.; Kadysh, I.Ya.; Fursa, I.S.; Khodyrev, Yu.S.

TITLE: Investigation of the drag of plasma electrons by a traveling magnetic wave

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.2, 1965, 212-222

TOPIC TAGS: plasma, plasma confinement, traveling wave, electron flux

ABSTRACT: The drag of electrons by traveling waves was investigated under steady state conditions in Xe, Kr, Ar, Ne, He, and H_2 plasmas at pressures from 3×10^{-4} to 8×10^{-2} mm Hg. This phenomenon is of interest in connection with plasma confinement and has other possible applications. The plasmas were contained in a 4.2 cm inner diameter, 18 cm mean principal diameter fused quartz torus and were excited by the traveling waves themselves. The traveling waves were produced by a loaded helical delay line wound on the toroidal plasma chamber and fed with an rf oscillator at from 1 to 4 Mc/sec. The phase velocity of the waves ranged from 4×10^7 to 4×10^8 cm/sec. The magnitude of the electron current in the plasma was determined by measuring the magnetic field on the principal axis of the torus with a saturated Permalloy frequency doubling probe. The electron density and temperature and the

1/2

L 27850-65

ACCESSION NR: AP5005220

high-frequency power absorbed by the plasma were also measured. Electron currents as great as 500 A were obtained for short intervals with the apparatus overloaded. As a function of pressure the electron current reached a maximum at a pressure that was independent of the absorbed power. The velocity of the electrons was nearly equal to the phase velocity of the waves under conditions of maximum current. A simple theory of the phenomenon is developed and the experimental results are compared with it. Reasonable agreement is found for pressures greater than that for which the current is maximum, but the theory does not account for the current peak observed. This inadequacy of the theory is ascribed to the neglect of the effects of thermal motion and the walls of the chamber. Orig.art.has: 14 formulas, 12 figures, and 2 tables. [02]

ASSOCIATION: none

SUBMITTED: 08Apr64 ENCL: 00 SUB CODE: NP, AM

NR REF SOV: 004 OTHER: 006 ATD PRESS: 3193

2/2

KADYSH, T. (Leningrad)

Moving ahead. Zhil.-kom.khoz. 12 no.10:17-18 O '62. (MIRA 16:3)
(Leningrad—Streetcars—Maintenance and repair)

KADYSH, T.

More about the organization of management of municipal electric transportation systems. Zhil.-kom.khoz. 19 no.6:13-14 '60. (MIRA 13:7)

1. Inzhener-ekonomist Tramvayno-trolleybusnogo upravleniya, g. Leningrad.

(Street railways)

KADYSH, T. (Leningrad)

Looking after the success of the whole staff. Zhil.-kom. khoz.11 no.4:8-9 Ap '61. (MIRA 14:6)
(Leningrad--Street railways)

KADYSH, T., inzh.-ekonomist

Operating streetcars without conductors in Leningrad. Zhil.-kom. khoz. 10 no.8:23-24 '60. (MIRA 13:9)

1. Leningradskoye tramvayno-trolleybusnoye upravleniye.
(Leningrad--Streetcars)

SHTERN, V.N. (Saratov, Komsomol'skaya ul., d. 41, kv. 34); KADYSHES, N.L. (Saratov, Astrakhanskaya ul., d. 118, kv. 29-a)

Roentgenotherapy of giant-cell tumors of the bone. Vop.onk. 4 no.6:721-720 '58. (MIRA 12:1)

1. Iz kafedry rentgenologii i radiologii (zav.- doktor med. nauk V.N. Shtern) Saratovskogo gosudarstvennogo meditsinskogo instituta (dir. - dots. B.A. Nikitin).

(GIANT CELL TUMORS, therapy,
x-ray ther. of bone tumors (Rus))
(RADIOTHERAPY, in various diseases,
giant cell tumors of bones (Rus))
(BONE AND BONES, neoplasms,
giant cell tumors, x-ray ther. (Rus))

KADYSHES, M.L.

X-ray diagnosis of echinococcosis of the pelvic bones [with summary in English]. Vest.rent. i rad. 33 no.5:72-78 'S-O '58 (MIRA 11:11)

1. Iz kafedry rentgenologii i radiologii (zav. dkotor med.nauk V.N. Shtern) Saratovskogo meditsinskogo instituta (dir. dotsent B.A. Nikitin).

(PELVIS, dis.
echinococcosis of pelvic bones, x-ray diag. (Rus))
(ECHINOCOCOSIS, diag.
pelvic bones, x-ray diag. (Rus))

SHTERN, V.N., prof.; KADYSHES, N.L.

On S.D. Ternovskii and M.V. Volkov's article "Surgical treatment of osteoblastoclastomas in children." Ortop., travm.i protez. 20 no.12:66-67 D '59. (MIRA 13:5)
(BONES--TUMORS) (TERNOVSKII, S.D.)
(VOLKOV, M.V.)

1. KADYSHEV, G. K.

2. USSR (600)

4. Karakul Sheep

7. Revise present standards for karakul pelts (2-3 days), Kar. i zver., 6, no. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KADYSHEV, L. A.

"Finance and credit of the people's democracies." Reviewed by L. Kadyshev. Fin.SSSR 16 no.3:87-91 Mr'55. (MLRA 8:2)
(Europe, Eastern--Finance) (China--Finance)

MOTYLEV, V.Ye., prof.; KADYSHEV, L.A., red.; TIMOKHIN, S., tekhn.red.

[Economic motives and consequences of great geographical discoveries; lectures in a course on the "History of the national economy of foreign countries."] Ekonomicheskie prichiny i posledstviia velikikh geograficheskikh otkrytii; lektsii po kursu "Istoriia narodnogo khoziaistva zarubezhnykh stran." Moskva, M-vo vysshego obrazovaniia SSSR, 1957. 21 p. (MIRA 11:1)

(Discoveries (in geography))

KADYSHEV, L. A.

Development of the monetary system of the people's democracies.
Den. i kred. 16 no.4: 38-47 Ap '58. (MIRA 11:5)
(Money)

ATLAS, M.S., doktor ekon.nauk, red.; POGREBINSKIY, A.P., prof., red.; KADYSHEV, L.A., dotsent, red.; MAKSIMOVA, L., red.

[Problems in political economy] Voprosy politicheskoi ekonomii. Moskva, 1958. 317 p. (MIRA 12:4)

1. Moscow. Finansovyy institut.
(Economics)

KADYSHEV, Lev Aleksandrovich; SIMAKINA, I.N., red.

[State budget, credit and currency circulation under socialism] Gosudarstvennyi biudzhet, kredit i denezhnoe obrashchenie pri sotsializme. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1959. 58 p. (MIRA 13:4)

(Finance)

KADYSHEV, L.

"Finance of the people's democracies" by D.Butakov, V.Bochkova, I.Shevel'. Reviewed by L.Kadyshev. Fin. SSSR 21 no.11:89-91 N '60. (MIRA 13:11)

(Communist countries--Finance)
(Butakov, D.) (Bochkova, V.)
(Shevel', I.)

ALLAKHVERDYAN, D.A., prof.; AMINOV, A.M., doktor ekon. nauk; AGLAS, M.S., prof.; D'YACHENKO, V.V., dots.; LOBIN, I.D., prof.; KADYSHEV, L.A., dots.; KARNAUKHOVA, Ye.S., prof.; KOTOV, G.G., prof.; LEVITANUS, I.M., dots.; LIVSHITS, A.L., dots.; LYAPIN, A.P., prof.; MAKAROVA, M.F., prof.; MASLOV, P.P., prof.; SONIN, M.Ya., doktor ekon.nauk; SOROKIN, G.M.; STRUMILIN, S.G., akademik; TUMANOVA, L.I., dots.; TUROVTSEV, V.I., dots.; FIGURNOV, P.K., prof.; MOKHOVA, N.I., dots., red.; SHCHERBAKOVA, V.V., dots., red.; SHVEYTSER, Ye.K., red.; MURASHOVA, V.A., tekhn. red.

[The economics of socialism]Politicheskaia ekonomiia sotsializma. Izd.2., perer. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 614 p. (MIRA 16:3)

1. Chlen-korrespondent Akademii nauk SSSR (for Sorokin).
(Economics) (Communism)

ATLAS, M.; KADYSHEV, L.; MAKAROVA, M.; SOROKIN, G.; FIGURNOV, P.

On the basic economic law. Vop. ekon. no.1:39-52 Ja '62. (MIRA 15:1)

(Economics)

KADYSHEV, Vladimir Petrovich; PISKOVITL', F.G., red.

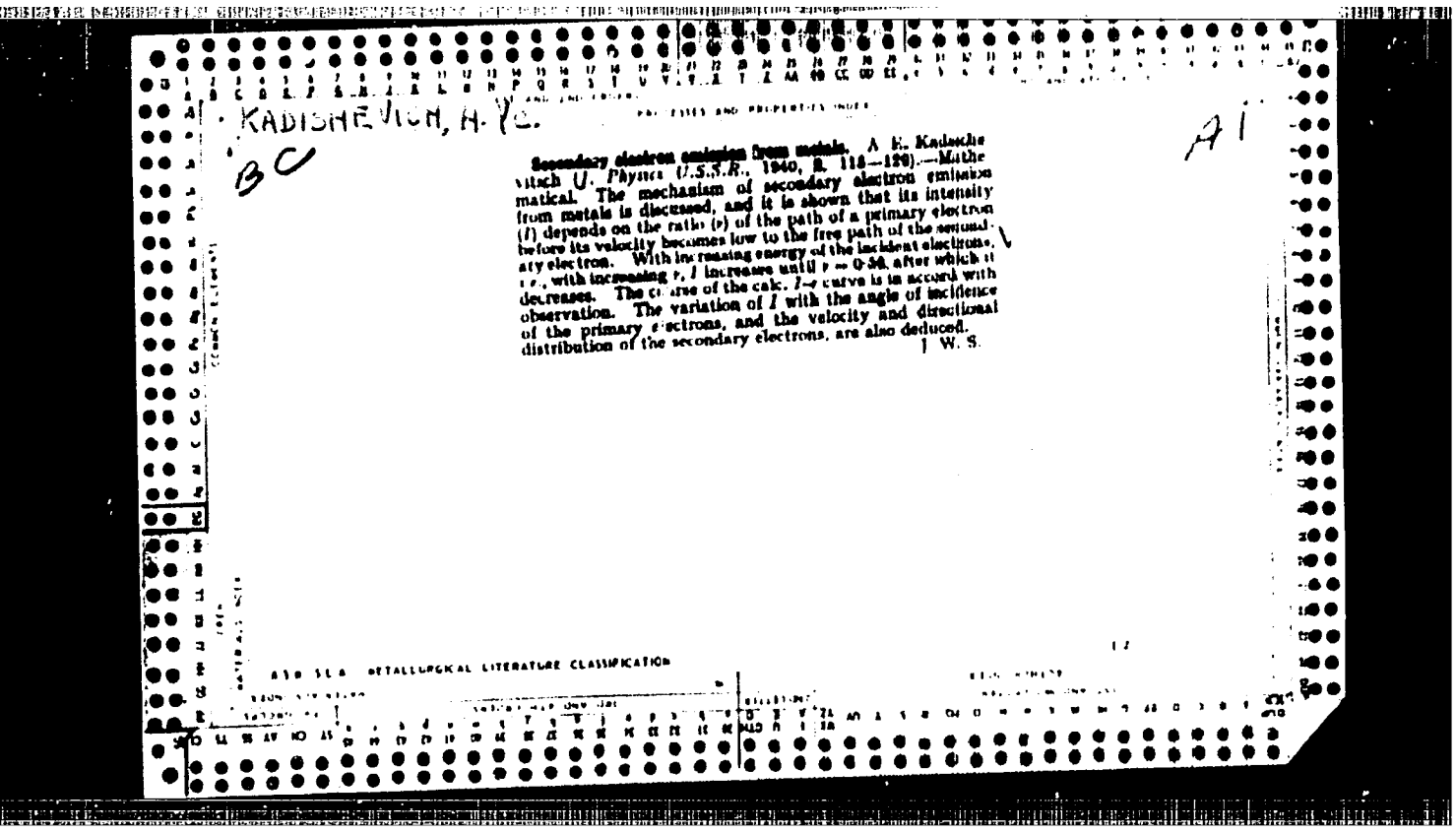
[The U.S.S.R. in foreign markets] SSSR na vneshnikh ryn-
[illegible] n. Moskva, Vneshtorgizdat, 1964. 80 p.
(MIRA 17:7)

KADYSHEVICH, A. E.

COMMON ELEMENTS

A theory of secondary electron emission from metals. A. E. Kadyshevich. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 9, 330–43 (1939) (in Russian); *J. Phys.* (U. S. S. R.) 2, 115–29 (1940) (in German).—The mechanism of secondary emission has been considered and the role of the free path of primary and secondary electrons detd. It is shown that the *fundamental law of moderation* of secondary emission can be defined by the ratio of A_1 (the distance that the primary electron traverses before it transforms itself into a slow one) to A_2 (the free path of the secondary electrons). The secondary emission increases with the increase in energy of the incident electron as long as A_1/A_2 = 0.56, reaches a max. with A_1/A_2 = 0.56 and decreases with further decrease in energy of the incident electrons. The path of the curve is in good agreement with exptl. results. The dependence of the max. emission can also be found from the angle of incidence of primary electron rays, as well as from the distribution speed of secondary electrons and the direction of their ejection from the metal.

F. A. Gorel



KADISHEVICH, A. Ye.

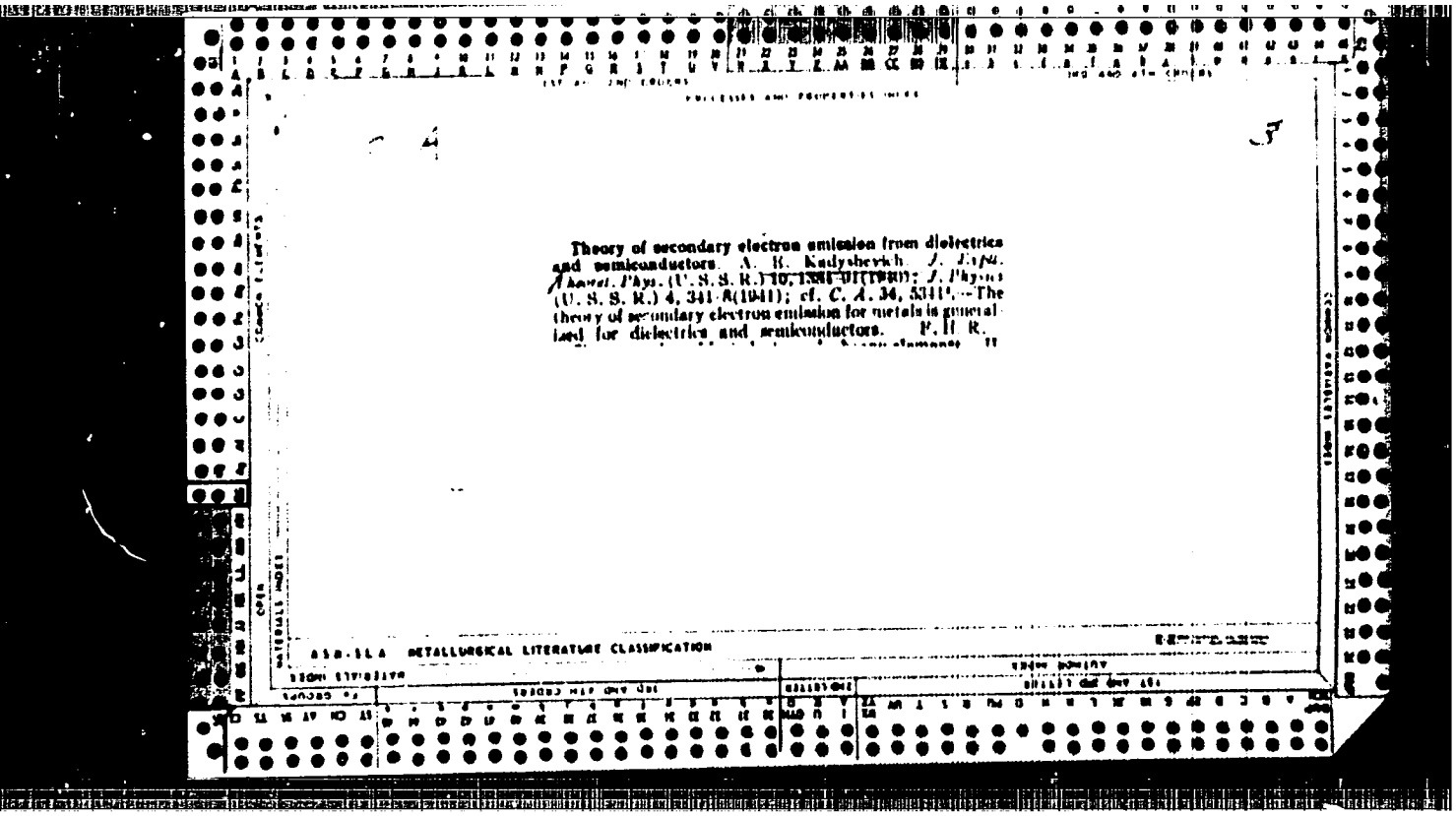
BC

A1

Secondary electron emission from metals. A. E. Kadischevitsch (U. *Physics U.S.S.R.*, 1940, **2**, 115—126).—Mathematical. The mechanism of secondary electron emission from metals is discussed, and it is shown that its intensity (I) depends on the ratio (ν) of the path of a primary electron before its velocity becomes low to the free path of the secondary electron. With increasing energy of the incident electrons, i.e., with increasing ν, I increases until $\nu = 0{\cdot}50$, after which it decreases. The course of the calc. I–ν curve is in accord with observation. The variation of I with the angle of incidence of the primary electrons, and the velocity and directional distribution of the secondary electrons, are also deduced.

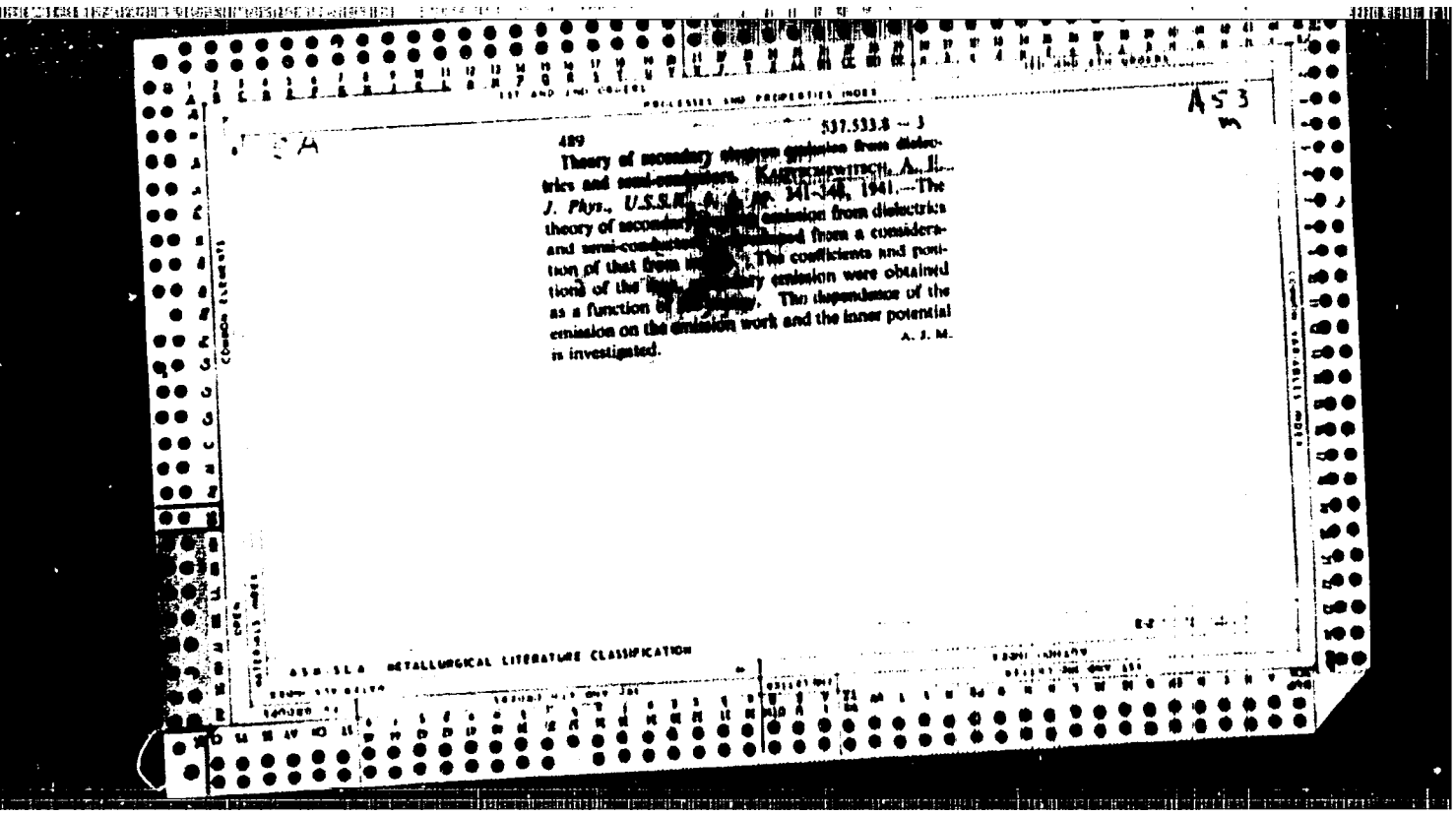
W. S.

A10 51A METALLURGICAL LITERATURE CLASSIFICATION



Theory of secondary electron emission from dielectrics and semiconductors. A. R. Kadyshevich. *J. Tech. Phys.* (U. S. S. R.) 10, 1351–91 (1940); *J. Physics* (U. S. S. R.) 4, 341–8 (1941); cf. *C. A.* 34, 5311⁹.—The theory of secondary electron emission for metals is generalized for dielectrics and semiconductors. P. H. R.

A53-51A METALLURGICAL LITERATURE CLASSIFICATION



537.533.8 — 3

489

Theory of secondary electron emission from dielectrics and semi-conductors. KANTOROWITSCH, A. [illegible] J. Phys., U.S.S.R., 1941, 4, (3), pp. 341–348, 1941.—The theory of secondary electron emission from dielectrics and semi-conductors is developed from a consideration of that from metals. The coefficients and positions of the [illegible] secondary emission were obtained as a function of [illegible]. The dependence of the emission on the emission work and the inner potential is investigated.

A. J. M.

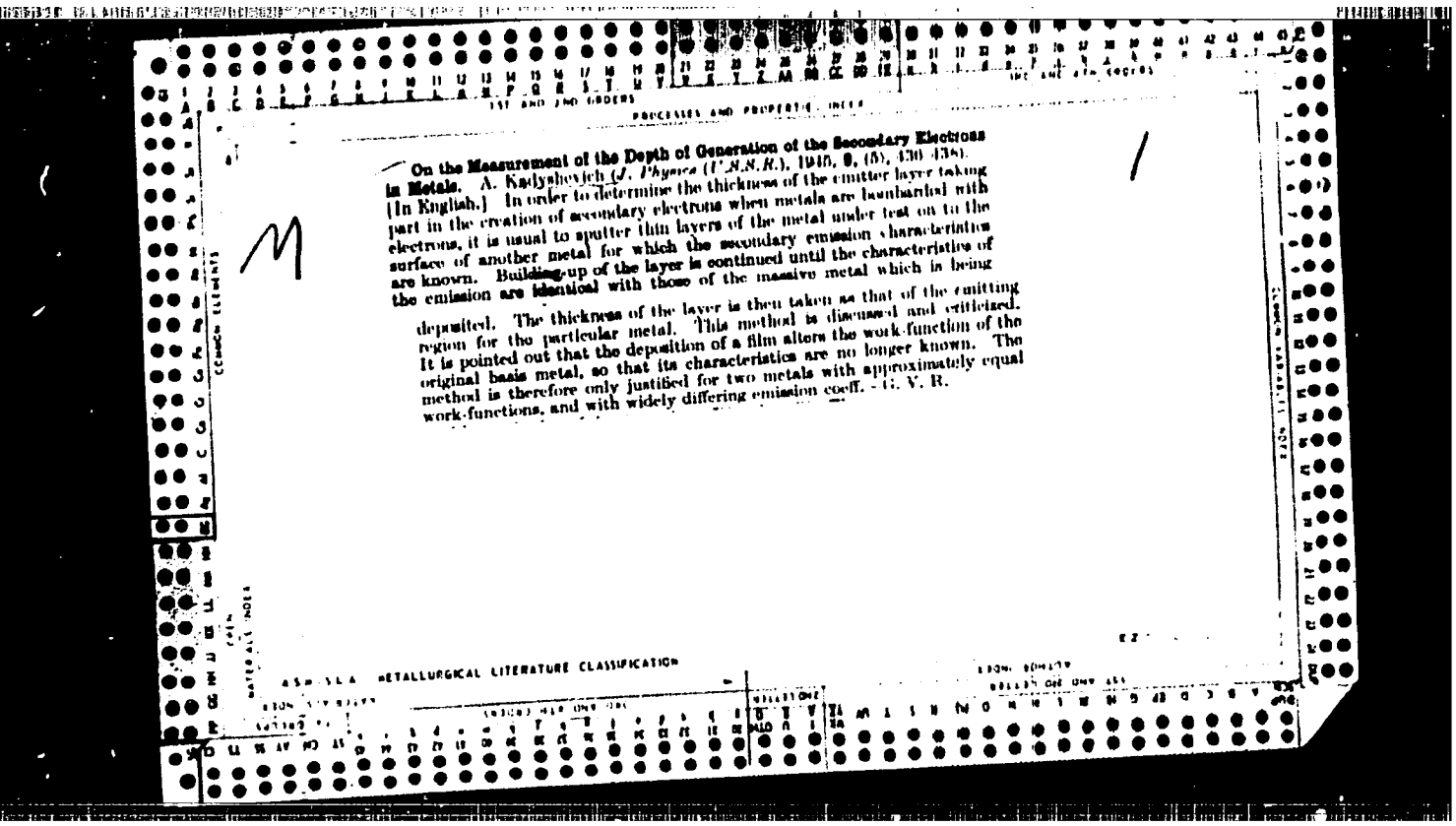
A53

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KINCHEVICH, A. [Ye.]

BC

Velocity distribution of secondary electrons for various emitters. A. Kulinchevitch (*J. Physics U.S.S.R.*, 1940, **2**, 431—434).—The character of the velocity distribution of secondary electrons is determined by the energy parameters of metals, dielectrics, and semiconductors, but is practically independent of the velocity of the primary electrons. H. Bu.



On the Measurement of the Depth of Generation of the Secondary Electrons in Metals. A. Kadyshevich (*J. Physics (U.S.S.R.)*, 1940, **3**, (5), 430-438). [In English.] In order to determine the thickness of the emitter layer taking part in the creation of secondary electrons when metals are bombarded with electrons, it is usual to sputter thin layers of the metal under test on to the surface of another metal for which the secondary emission characteristics are known. Building-up of the layer is continued until the characteristics of the emission are identical with those of the massive metal which is being deposited. The thickness of the layer is then taken as that of the emitting region for the particular metal. This method is discussed and criticized. It is pointed out that the deposition of a film alters the work-function of the original basis metal, so that its characteristics are no longer known. The method is therefore only justified for two metals with approximately equal work-functions, and with widely differing emission coeff. - G. V. R.

ASM-WLA METALLURGICAL LITERATURE CLASSIFICATION

KADYSHEVICH A.

USSR/Electrons - Emission Oct 1945
Electrons, Secondary

"Distribution of Secondary Electrons According to Velocities for Different Emitters," A. Kadyshevich, 5 pp

"Zhur Eksp i Teor Fiz" Vol XV, No 10

Establishment of the dependence of the shape of the curve of secondary electron velocity distribution on the primary electron velocity and energetic parameters of the emitter, and of a connection between the effectiveness of the emitter and the character of the curve of secondary electron velocity distribution.

10T95

BR

PHASE I BOOK EXPLOITATION SOV/5919

Kadyshevich, Abo Yefimovich

Izmereniye temperatury plameni; fizicheskiye osnovy i metody (Temperature Measurement of the Flame; Physical Principles and Methods) Moscow, Metallurgizdat, 1961. 218 p. Errata slip inserted. 4600 copies printed.

Ed. of Publishing House: K. N. Yeremeyeva; Tech. Ed.: P. G. Islent'yeva.

PURPOSE: This book is intended for scientific and technical personnel of metallurgical, machine-building, and power establishments and institutes. It may also be useful to students in related fields at schools of higher education.

COVERAGE: The book discusses optical methods of measuring temperatures of technical flames, the application of these methods, and the accuracy of the results obtained. Particular attention is given to results of investigations of the dependence of measuring errors on the space-time structure of the flame, to the regions of the application of the spectrum, and to the special features of temperature measurement according to infrared radiation. Experimental verifications were made in

Card 1/

an open high-velocity flame of an air-breathing ramjet engine and in a closed air-acetylene flame of a metallurgical furnace with the assistance of O. N. Dubrovskaya, Ya. I. Merson, K. P. Vlasov, and V. A. Dokuchayeva. The author thanks A. M. Gurevich. References accompany Chs. I through XIII.

TABLE OF CONTENTS:

30883
S/148/61/000/009/012/012
E081/E135

11.7200

AUTHORS: Kadyshevich, A.Ye., and Dokuchayeva, V.A.

TITLE: The applicability of visible and infrared pyrometric methods to flame temperature measurement in a limited space

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no.9, 1961, 180-190

TEXT: Previous work has shown that the optical method of measuring flame temperature gives satisfactory results if the flame is homogeneous and steady. However, in actual flames, there are temperature gradients and periodic fluctuations of temperature with time. Two average temperatures are defined, one the arithmetical average and the other weighted with respect to gas density. The purpose of the present investigation is to study the applicability of optical and infrared methods to a closed flame as found, for example, in a metallurgical furnace. An apparatus developed by V.A. Krivandinyy is described, for measuring the mean optical temperature of a flame by the method of spectral line reversal. The temperature was measured of a

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vertical flame in a combustion chamber (120 cm high, 70 cm wide) burning a mixture of town gas with air, which was open at the top and lined with refractory brick and water cooled. Mica windows were fitted from four sides to permit observation of the flame without allowing the drawing in of cold air. Mixing of the fuel and the oxidizer was by using a burner of the type "tube inside tube". The arrangement was such that it was possible to change over from a diffusion flame to a flame forming on combustion of a homogeneous mixture, i.e. from poor mixing to good mixing of the fuel and the oxidant. The length of the mixing pass could be varied between zero and 395 mm. Oscillograms of the fluctuations of ion current in a flame were recorded. Curves are reproduced in the paper showing the variation of flame temperature with excess air coefficient as measured in the optical and infrared regions. It was found that the optical method leads to substantial errors and has only limited applicability. The infrared method is more widely applicable and yields more accurate measurements. There are 5 figures and 7 Soviet-bloc references.
ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)
SUBMITTED: February 21, 1961.
Card 2/2

KADYSHEVICH, A.Ye.; DOKUCHAYEVA, V.A.

Sources of error in the measurement of flame temperature by infrared radiation. Izv. vys. ucheb. zav.; chern. met. 5 no.3: 184-195 '62. (MIRA 15:5)

1. Moskovskiy institut stali.
(Pyrometry) (Infrared rays)

11,7200

3725

S/053/62/076/004/003/004
B104/B102

AUTHOR: Kadyshevich, A. Ye.

TITLE: Present state and development of optical flame pyrometry

PERIODICAL: Uspekhi fizicheskikh nauk, v. 76, no. 4, 1962, 683-710

TEXT: The influence of irregular burning of a flame on the accuracy of temperature measurements with optical pyrometers in various spectral ranges is studied experimentally and theoretically. Irregularities in the fuel-to-oxidizer ratio and temperature variations of a flame must be considered in pyrometric measurements, and the flame spectrum and emissive properties must be known. In general, the optical spectral range is inconvenient. Fuel and oxidizer should be mixed thoroughly and must be in a stoichiometric proportion. Temperature should be measured at a point without temperature gradient and temperature variations. These requirements cannot be satisfied in practice. Instead, so-called "instantaneous" measurements at "one" point are proposed, which can be made in a very short time compared with the period of temperature variations. In the infrared, the error can be reduced. It is noted

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Present state and development ...

that the infrared measuring technique needs further improvement, and that better instruments easy to calibrate are required for automatic measurements. M. L. Veyngrov's infrared pyrometer (DAN SSSR, 19, 687 (1938)) is mentioned. There are 14 figures.

Card 2/2

BEYLIN, V.M.; VEKILOV, Yu.Kh.; KADYSHEVICH, A.Ye.; PIGUZOV, Yu.V.; RATTKE, R.

Influence of the intrinsic photoeffect on the damping of elastic waves in Ge. Fiz. tver. tela 5 no.8:2371 Ag '63. (MIRA 16:9)

1. Moskovskiy institut stali i splavov.
(Elastic waves) (Photoelectricity)

KADYSHEVICH, A. Ye.

Improving the control over the mixing of fuel and oxidizer in the flame. Izv. vys.ucheb.zav.; chern.met.7 no. 5:154-156 '64. (MIRA 17:5)

1. Moskovskiy institut stali i splavov.

KADYSHEVSKIY, A.Ye.

Optical methods of determining the concentration of soot in flame. Izv. vys. ucheb. zav.; chern. met. 7 no.7:215-220 '64
(MIRA 17:8)

1. Moskovskiy institut stali i splavov.

OKOROKOV, B.N.; YAVOYSKIY, V.I.; KADYSHEVICH, A.Ye.; KUCHUR, B.K.

Certain optical and physical properties of the flame cone in a basic, oxygen-blown converter (in the visible part of the radiation spectrum) and their use to control the process. Izv. vys. ucheb. zav.; chern. met. 8 no.5:21-28 '65.

(MIRA 18:5)

1. Moskovskiy institut stali i splavov.

KADYSHEVICH, A.Ye.

Further on the optical pyrometry of a real flame. Opt. i spektr. 18 no.6:1089-1090 Je '65.

(MIRA 18:12)

81685

S/029/60/000/07/21/024
B013/B058

24.6100

AUTHORS: Kadyshevskiy, V., Zav'yalov, O., Students of the Department of Physics of the MGU

TITLE: Scientific Society of Students of Physics of the MGU. Fifth Dimension. Superconductivity and Memory Cells

PERIODICAL: Tekhnika molodezhi, 1960, No. 7, pp. 35-36

TEXT: V. Kadyshevskiy and O. Zav'yalov, students of the fizicheskiy fakul'tet MGU (Department of Physics of the MGU), give under the heading "Fifth Dimension" a short report on the theory of the calculation of the mass of elementary particles with the aid of the fifth dimension developed by them. They point out that experiments for the introduction of the 5th dimension have already been made previously. The additional micro-dimension could, however, not be used for the calculation of the mass of elementary particles, since it was impossible to obtain a quantity with the dimension of the mass from the obtainable "world constants". This difficulty can be overcome by the fact that the radius of the fifth micro-circle coordinate is considered as a new "world quantity" which was lacking

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Scientific Society of Students of Physics of the MGU. Fifth Dimension. Superconductivity and Memory Cells

S/029/60/000/07/21/024
B013/B058

more quickly it operates. The operating time of the cell would be shortened to one-tenth or even one-hundredth of a microsecond in the case of a ring with 1 mm diameter which is absolutely realizable. These cells give the possibility of building computers which could carry out up to 10 million operations per second. There are 5 figures.

ASSOCIATION: Moskovskiy universitet (Moscow University)

Card 3/3

80083
S/020/60/131/06/21/071
B014/B007

24.4400

AUTHOR: Kadyshevskiy, V. G.

TITLE: The Problem of the Mass Spectrum and the Fundamental Length in the Field Theory

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 131, No. 6, pp. 1305 - 1307

TEXT: By way of introduction it is stated that the modern field theory contains no constant dimensions of length, and that it is therefore not possible to calculate the mass of elementary particles. Some information concerning the mass spectrum may, however, be obtained by making use of the properties of the group of automorphisms. It is thus possible to show that the system of all single-particle state-amplitudes may be transformed by means of an irreducible representation of the Lorentz group, so that the mass in this system is a continuous parameter. The author defines a Lorentz group L, the elements of which are denoted by Λ (four-rotation) and a (four-translation). By means of the transformation $a_0 = \nu a, \Lambda^0 = \Lambda$, where ν is an arbitrary real number, the continuity of the particle masses in the system $\{|p_{(n)}\rangle\}$, (where $p^2_{(n)} = m^2_n$ is the system of all possible

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The Problem of the Mass Spectrum and the Fundamental Length in the Field Theory

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S/020/60/131/06/21/071
B014/B007

single-particle states is proved. In order to obtain a discrete mass spectrum the group L must be replaced by another, and two possibilities for the transformation (4) are discussed. If the particles of different masses are interpreted as the mass states of a single field of matter, the mass m must be considered to be a dynamic variable of the field. Thus, a fifth coordinate must be introduced, and the equations of motion of the field are: $(\vec{i}\hat{\partial}/\partial x + i\,\partial/\partial x_5)\psi = 0$; $(\Box + \partial^2/\partial x_5^2)\varphi = 0$. In order to obtain a discrete mass spectrum, the fifth coordinate must have a period l, and the relations $m_n = 2\pi n/l$ $(n = 0, 1, 2, ...)$ are given. Thus, for $l/2\pi = 2r_o = 5.6\cdot10^{-13}$ cm (r_o = the classical electron radius) the relation $m_n = nm_e 137/2$ is obtained. From this formula one obtains $n = 0; 3; 4; 14; 27;..$ particle masses, which are near that of the photon, the nucleons, and the μ-, π-, and $\varkappa$-mesons. Next, the author discusses the peculiarities of introducing the fifth dimension and states that period l of the fifth coordinate plays the part of the fundamental length. He thanks N. N. Bogolyubov and M. A. Markov for their supervision and instructions. There are 5 references, 2 of which are Soviet.

Card 2/3

The Problem of the Mass Spectrum and the Fundamental Length in the Field Theory

80083
S/020/60/131/06/21/071
B014/B007

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: December 28, 1959, by N. N. Bogolyubov, Academician

SUBMITTED: December 25, 1959

Card 3/3

S/056/61/041/006/035/054
B112/B108

24 4400

AUTHOR: Kadyshevskiy, V. G.

TITLE: Theory of quantized space-time

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki v. 41, no. 6 (12), 1961, 1885 - 1894

TEXT: This paper is based on the hypothesis that the local structure of the coordinate space (x-space) and the global structure of the momentum space (p-space) are closely related to weak interactions of elementary particles. A new p-space geometry is developed. The group $(\tilde{L}_{10})$ of motions of this geometry is the group of automorphisms of the hypersurface

$$p^2 = p_0^2 - p_1^2 - p_2^2 - p_3^2 = \varepsilon^2 \qquad (\varepsilon = \pm 1)$$

where ε is the elementary length. This group is isomorphic to the group $(G_{10})/(1)$, where (G_{10}) is the group of automorphisms of the five-dimensional fundamental form

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Theory of quantized space-time

$$(g^{\mu\nu}) = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 & 0 \\ 0 & 0 & -1 & 0 & 0 \\ 0 & 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & 0 & -1 \end{pmatrix},$$

and where $(\bar{J})$ is the subgroup of (G_{10}), consisting of the identity I and of -I. The partition

$$\Gamma^{\mu}\Gamma^{\nu} + \Gamma^{\nu}\Gamma^{\mu} = 2g^{\mu\nu}$$

leads to the following spin representation (S) of $(\bar{L}_{10})$: A given transformation A of (G_{10}) induces a spin transformation S which fulfills the conditions

$$S^{-1}\Gamma^{\mu}S = A^{\mu}_{\nu}\Gamma^{\nu}$$

Card 2/2

Theory of quantized space-time

A translation k in p-space reads explicitely

$$p' = p(+)k = (p\sqrt{1 - k^2l^2} + k(1 + \varepsilon(pk)l^2/(1 + \sqrt{1-\varepsilon k^2 l^2})))/(1 + \varepsilon(pk)l^2).$$

The infinitesimal transformation of the scalar wave function $\varphi(p)$, which is induced by an infinitesimal translation k in p-space, is given by

$$\varphi(p(+)k) = (1 - i(xk))\varphi(p).$$

This relation implies the following quantization of x-space:

$$x^\alpha = i(\partial/\partial p_\alpha + \varepsilon l^2 p_\alpha p_m \partial/\partial p_m), \qquad (\alpha = 1,2,3)$$

$$t = i(\partial/\partial p_o - \varepsilon l^2 p_o p_m \partial/\partial p_m).$$

Academician N. N. Bogolyubov, Academician I. Ye. Tamm, V. I. Grigor'yev, I. S. Shapiro, I. A. Shishmarev, and Yu. A. Go'fand are thanked for assistance. I. S. Shapiro (UFN, 61, 313, 1957.) and Yu. A. Gol'fand

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Theory of quantized space-time

(ZhETF, 37, 504, 1959.) are referred to. There are 1 figure, 2 tables, and 8 references: 3 Soviet and 5 non-Soviet. The two most recent references to English-language publications read as follows: H. Snyder, Phys. Rev., 71, 38, 1947; V. Bargmann, E. Vigner, Proc. Nat. Acad. of Sci. 34, 211, 1948.

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AUTHOR: Kadyshevskiy, V. G.

TITLE: Theory of the Discrete Space-Time Continuum

PERIODICAL: Doklady Akad ii nauk SSSR, 1961, Vol. 136, No. 1, pp. 70-73

TEXT: The constants c, $\hbar$ and the unit length $l = 7 \cdot 10^{-17}$ cm are investigated. It is shown that they may be considered to be a "compensation" for an information lost when they were introduced From the fact that in the space-time continuum spaces that are smaller than l, cannot be measured, conclusions are drawn as to the quantum-like nature of the space-time continuum with the step l. Thus, the lack of conservation of parity in weak interactions may be considered to be a consequence of the discreteness of the space-time continuum. In electromagnetic interactions and strong interactions the conservation of parity is considerable, because the "effective radius" is large in comparison to l, and these interactions may be described in a new sense as "classical". It is then shown that an integer a may be considered to be a function of the parameter p, and that the totality of all integers, the ring C, will then be a certain function of p.

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Then, the ring C, considered to be a function of p, will have the value $GF(p_o)$ at the point $p = p_o$, or, in terms of "spin notation":

$$C = \begin{pmatrix} GF(p_1) \\ GF(p_2) \\ \cdots\cdots \\ GF(p_k) \\ \cdots\cdots \\ \cdots\cdots \end{pmatrix} = GF(p)$$

In the following, several results obtained by Coish (Ref. 1) and I. S. Shapiro (Ref. 2, in print) concerning the group of motion in R_4 are discussed, and the construction of R_4' is dealt with, whose "quantum" is $1_o Z = 1$, where $Z = 2\prod_i p_i$. This R_4' is considered to be physical and has, in terms of "spin notation", the form

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Theory of the Discrete Space-Time Continuum S/020/61/136/001/012/037
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$$R_4' = \begin{pmatrix} 0 & & & & \\ & R_4(3) & & & \\ & & 0 & & \\ & & & R_4(7) & \\ & & & & \ddots \\ & & & & & R_4(p = 4n-1) \\ & & & & & & \ddots \end{pmatrix}$$

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KADYSHEVSKIY, V. G.

"On Quntized Space-Time Theory"

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Laboratory of Theoretical Physics, Dubna, 1962

KAJNSHEVSKIY, V.G.; SARANTSEVA, V.R., tekhn. red.

[Different parametrizations in quantized space-time theory] O razlichnykh parametrizatsiiakh v teorii kvantovannogo prostranstva-vremeni. Dubna, Ob"edinennyi in-t iadernykh issl. 1962. 6 p. (MIRA 15:10)
(Projection) (Quantum field theory)